

CLAIM LISTING

Please amend the claims as follows:

1. (Currently Amended) A method for deterministic registration for communication networks comprising:

transmitting a node register command over a network, the node register command comprising ~~[[:]] a first plurality of bits and a second plurality of bits, the first and second plurality of bits addressing a range of potential nodes that should respond to the node register command;~~
and

determining, by a particular node and based upon the plurality of bits, whether the particular node corresponds to the range of potential nodes;

determining, by the particular node and based upon the plurality of bits and an identifier of the particular node, a corresponding time delay;

~~plurality of time slot delays; during each of the plurality of time slot delays;~~

listening to the network for a response from a node in the range of nodes, ~~the node determined by each of the plurality of time slot delays; and~~

determining, based upon the time slot delay in which the response is received, the particular node in the range of nodes from which the response was received; and

responsive to detecting ~~[[a]]~~the response, determining a responding node corresponding to the response and designating the responding node as registeredregistering the node.

2. (Currently Amended) The method of claim ~~[[1]]~~29, wherein the second plurality of bits are padded with zeros.

3. (Currently Amended) The method of claim ~~[[1]]~~29, wherein the node register command further comprises a third plurality of bits.

4. (Currently Amended) The method of claim 1 further comprising:
creating a confirmation packet ~~comprising a second plurality of time slot delays;~~
transmitting the confirmation packet; and
during ~~each of the second plurality of~~ the corresponding time slot delay[[s]], transmitting a signal based on a registration status of ~~a corresponding~~ the particular node, the signal being a confirmation of the registration of the ~~corresponding~~particular node.

5. (Currently Amended) The method of claim 1 further comprising, ~~during each of the plurality of~~ the time slot delay[[s]], calibrating a receiver during a first portion of ~~each of the plurality of~~ the time slot delay[[s]].

6. (Currently Amended) The method of claim 1, wherein ~~each of the plurality of~~ the time slot delay[[s]] is a response period during which at most one node may transmit a message in response to the node register command.

7. (Currently Amended) The method of claim 4 further comprising, during ~~each of the second plurality of the~~ time slot delay[[s]], not transmitting a signal if the corresponding node is not registered.

8. (Currently Amended) A method for registering during a deterministic registration process comprising:

at a node, receiving a node register command addressing a range of nodes, ~~the node register command comprising a plurality of time slot delays;~~

determining whether the node is in the range of addressed nodes;

responsive to determining that the node is in the range of addressed nodes, determining the proper time slot delay, based upon the addressed range of nodes and the node's serial number, and waiting for [[a]]the determined proper time slot delay, ~~the proper time slot delay being one of the plurality of time slot delays, the proper time slot delay corresponds to the node;~~ and

transmitting a message during the proper time slot delay, the message being a response to the node register command.

9. (Original) The method of claim 8, wherein the message is a 'true' signal.

10. (Original) The method of claim 8 further comprising setting a tentatively registered flag.

11. (Currently Amended) The method of claim 8 further comprising:

receiving a confirmation packet comprising a second plurality of bits identifying the packet as the confirmation packet~~the time slot delays;~~

automatically waiting for an assigned- a second time slot delay based upon a node's serial number, the assigned time slot delay being one of the second plurality of time slot delays;

during the ~~assigned~~ time slot delay, listening for a confirmation message; and responsive to detecting a confirmation message, setting a registered flag.

12. (Original) The method of claim 11, wherein the confirmation message is a 'true' signal.

13. (Currently Amended) A computer-readable storage medium having stored thereon computer instructions that, when executed by a computer, cause the computer to:

transmit a node register command over a network, the node register command comprising~~[[:]] a first plurality of bits and a second plurality of bits, the first and second plurality of bits addressing~~ indicating a range of nodes that should respond to the node register command, wherein the existence of each of the nodes in the range of nodes is unknown to a device transmitting the node register command; and

listen during each of a plurality of time slot delays for a response message, each of the plurality of time slot delays designated for identifying one [[of]] node in the range of nodes, the response message comprising an identifier identifying the responding node to transmit a response message; and

~~during each of the plurality of time slot delays, listen to the network for the response message; and~~

associating the identifier identifying the responding node with one of the nodes in the range of nodes, based upon the time slot delay in which the response message was received; and responsive to detecting [[a]]the response message, determine a responding one of the range of nodes that transmitted the response message and designate the one of the range of nodes as registered registering the node and its associated identifier.

14. (Currently Amended) The computer-readable storage medium of claim [[13]]30, wherein the second plurality of bits is padded with zeros.

15. (Currently Amended) The computer-readable storage medium of claim 13, wherein the computer instructions that transmit the node register command further comprise computer instructions that, when executed by a computer, cause the computer to: create a confirmation packet ~~comprising a second plurality of time slot delays~~; transmit the confirmation packet; and during each each time slot delay for which a response message was received~~of the second plurality of time slot delays~~, transmit a confirmation message to indicate confirmation of the registration of a corresponding node, the corresponding node being one of the range of nodes.

16. (Original) The computer-readable storage medium of claim 13, wherein the computer instructions that transmit the node register command further comprise computer instructions that, when executed by a computer, cause the computer to: during a portion of each of the plurality of time slot delays, determine a level of noise in the network; and set a threshold for a good signal, the threshold being above the level of noise.

17. (Original) The computer-readable storage medium of claim 13, wherein each of the plurality of time slot delays comprises a calibration period and a response transmission period.

18. (Currently Amended) A computer-readable storage medium having stored thereon computer instructions that, when executed by a computer, cause the computer to:

receive a node register command addressing a range of nodes, ~~the node register command comprising a plurality of time slot delays;~~

determine whether to respond to the node register command, based upon a responding node's inclusion in the range of nodes addressed; and

responsive to determining to respond to the node register command, transmit a message during ~~an assigned time slot delay~~ calculated based upon the responding node's location in the range of nodes and an identifier associated with the node, ~~the assigned time slot delay being one of the plurality of time slot delays, the message being a response to the node register command.~~

19. (Original) The computer-readable storage medium of claim 18, wherein the computer instructions that receive the node register command further comprise computer instructions that, when executed by a computer, cause the computer to set a tentatively registered flag.

20. (Currently Amended) The computer-readable storage medium of claim 18, wherein the computer instructions that receive the node register command further comprise

computer instructions that, when executed by a computer, cause the computer to: receive a confirmation packet ~~comprising a second plurality of time slot delays;~~

wait for ~~an assigned~~ time slot delay, the ~~assigned-time slot delay being one of the second plurality of time slot delays~~ calculated based upon the responding node's location in the range of nodes;

during the ~~assigned~~ calculated time slot delay, listen for a confirmation message; and responsive to detecting a confirmation message during the time slot delay, set a registered flag.

21. (Original) The computer-readable storage medium of claim 20, wherein the confirmation message is a '1' signal.

22. (Original) The computer-readable storage medium of claim 18, wherein the message is a '1' signal.

23. (Cancelled)

24. (Currently Amended) A system for deterministic registration for communication networks comprising:

[[a]]means for transmitting a node register command over a network, the node register command ~~addressing a plurality identifying a range of nodes that should respond to the node register command, the node register command comprising a plurality of time slot delays, each of~~

~~the plurality of time slot delays designated for one of the plurality of addressed nodes to transmit a response message;~~

means for determining, based upon the range of nodes and a node identifier, whether the node is within the range and a corresponding time slot delay for sending a response message;

~~[[a]]means for detecting a transmission of [[a]]the response message during each of the plurality of time slot delay[[s]];~~

~~[[a]]means for determining [[a]]the responding node responsive to detecting a response messagebased upon the time slot delay in which the message is received and the range of nodes, the responding node being one of the plurality of addressed-identified nodes; and~~

~~[[a]]means for designating the responding node as registered.~~

25. (Currently Amended) The system of claim 24 further comprising: ~~[[a]]means for creating a confirmation packet comprising a second plurality of time slot delaysa confirmation identifier in the time slot delay; and [[a]]means for transmitting the confirmation packet; and a means for transmitting a confirmation message to indicate confirmation of the registration of the responding node during an appropriate one of the second plurality of time slot delays.~~

26. (Currently Amended) The system of claim 24 further comprising a means for calibrating a receiver during ~~a portion of each of the plurality of the~~ time slot delay[[s]].

27. (Currently Amended) A system for registering during a deterministic registration process comprising:

[[a]]means for receiving a node register command, the node register command addresses a plurality of nodes, ~~the node register command comprising a plurality of time slot delays;~~

[[a]]means for determining whether to respond to the node register command; and
means for calculating a time slot delay corresponding to a particular node based upon the plurality of nodes addressed and the particular node's serial number; and

[[a]]means for transmitting a message during ~~an assigned~~the calculated time slot delay in response to determining to respond to the node register command, ~~the assigned time slot delay being one of the plurality of time slot delays,~~ the message being a response to the node register command.

28. (Currently Amended) The system of claim 27 further comprising: [[a]]means for receiving a confirmation packet, the confirmation packet comprising ~~a second plurality of time slot delays~~a confirmation indicator in the time slot delay; and [[a]]means for detecting a confirmation message during an assigned time slot delay, ~~the assigned time slot delay being one of the plurality of time slot delays;~~ and a means for setting a registered flag in response to ~~detecting the confirmation message.~~

29. (New) The method of claim 1, where in the plurality of bits comprises a first plurality of bits and a second plurality of bits.

30. (New) The method of claim 13, where in the plurality of bits comprises a first plurality of bits and a second plurality of bits.

31. (New) The method of claim 1, further comprising:

- during a first portion of the time slot delay, determining a level of ambient noise in a network;
- determining a ceiling of the level of ambient noise;
- setting a threshold for a good signal to a predetermined level above the ceiling of the level of ambient noise; and
- during a second portion of the time slot delay, listening to the network for a signal.